

Temperature fell to normal, and pains subsided after two days' treatment, but pericarditis developed. Pulse became very feeble; vomiting and epigastric pain occurred nine days after commencement of treatment, unrelieved by reduction in frequency of the drug, which was discontinued on the eleventh day. A relapse occurred, but salicin was not prescribed again. Discharged on forty-sixth day. Case 7. First attack; third day. Temperature fell to normal on third day of treatment. Pains and vomiting subsided more slowly. Salicin continued till twenty-third day, and patient discharged on forty-fifth day. Case 8. Second attack; tenth day. Temperature fell to normal, and pains subsided within thirty-six hours from commencing to take salicin, which, at first given every two hours, was afterwards reduced owing to feebleness of pulse, and omitted on the twelfth day. Discharged on twenty-third day. Case 9. Second attack; third day. Complicated with pneumonia. Temperature became normal on tenth day; pains continued a day or two longer. Sounds and impulse of heart became very feeble on twelfth day. Discharged on thirty-third day. Case 10. Second attack; sixth day. Double pneumonia and hæmaturia; endocarditis and pleuro-pericarditis. Pains in joints disappeared on the seventh day of treatment, but temperature remained high until after the salicin had been discontinued, on account of persistent and uncontrollable sickness. Chloral and morphia were required frequently at night, and stimulants were freely given on account of the dyspnoea and feeble and irregular action of the heart. Twenty grains of salicin were given every two hours for seventeen days. It caused sickness at a very early period, and after a few days dryness and soreness of throat. Discharged on fifty-eighth day.

Thus the effects of the drug were not very satisfactory. The temperature appeared to be reduced and the pains to subside in the uncomplicated cases; but, in Cases 1, 2, 4, and 6, relapses occurred when the salicin was either discontinued or the frequency of the dose diminished. Case 5, one of relapse, had already been laid up some time, and recovery might have been as rapid under simple rest and diet; while in 9 and 10, complicated with pneumonia, the salicin did not appear to exert any influence on their progress. On the other hand, salicin appeared to produce some inconvenient consequences. In one case epistaxis, which recurred when the dose was increased; in four cases marked cardiac depression; nausea and vomiting in two cases. Lastly, the detention of the patients in hospital was not shortened by the treatment; for, except Cases 3, 5, and 8, two of which were approaching their close when admitted, the patients treated with salicin recovered more slowly than is common in cases of similar severity under other modes of treatment.

Salicylate of Soda in Acute Rheumatism.

At the same meeting (*Ibid.*), Dr. GREENHOW also reported fifty cases of rheumatic fever treated with salicylate of soda. He discussed, first, the physiological, and then the therapeutical, effects of salicylate of soda.

One of the most obvious effects of the treatment in the majority of cases was a speedy fall in temperature, sometimes within a few hours from commencing the treatment, and, save in a few cases, within two or three days. The pulse usually, but not invariably, came down in frequency with the fall of temperature. In forty-five of the fifty cases certain well-marked physiological symptoms attended the reduction of the fever. There were effects on the nervous system, such as deafness, vertigo, headache, noises in the ears, delirium, and hallucinations. Deafness often occurred early, and was noticed in twenty-seven cases. Sometimes it was very intense. Vertigo occurred in fourteen cases. Very

intense headache, chiefly frontal, though less frequent than deafness and vertigo, was, when it occurred, a much more distressing symptom. It was complained of in nine cases, and in some recurred with the resumption of the medicine. Delirium was present in eight cases, hallucinations in four. Great depression of pulse and action of the heart was the most important effect produced on the circulation, more or less weakening of the pulse, calling for stimulants in almost every case, great weakening of the impulse of the heart, and in ten cases almost complete obliteration of the first sound; in some, an irregular or dicrotous pulse. Vomiting occurred in twenty-two cases; great injection of the tongue in many cases; soreness of the fauces in three, and an aphthous state of the tongue in three cases; diarrhoea in two cases was evidently referred to the salicylate; epistaxis occurred in seven cases; in two transient albuminuria was observed; in two others tremor of the hands and tongue, which may not have been due to the drug.

Speaking of the therapeutical value of salicin and salicylate of soda in acute rheumatism, Dr. Greenhow said that his experience led him to regard these as the most powerful antipyretic agents with which he was acquainted. The temperature soon falls under their use: the pulse commonly falls at the same time, and the pains soon abate very considerably, and in most cases entirely cease within a few days. But the improvement in the symptoms only takes place coincidently with the development of one or more of the physiological phenomena already described; and in all the most acute cases the relief derived from the medicine passed away soon after the treatment was intermitted, and a relapse—in some cases several relapses—took place. On this ground these agents cannot be regarded as in any respect specifics in the treatment of rheumatic fever. Excluding two cases, which passed into the state of hyperpyrexia whilst under the physiological influence of salicylate of soda, two other cases, which proved fatal, and about fourteen very mild cases, from which no conclusions could be drawn, there were relapses in twenty-one out of the remaining thirty-two cases. In seven of these twenty-one cases there was only one relapse; in nine there were two; in two there were three; in other two four; and in one five relapses. A proportion of twenty-one out of thirty-two was a large one for relapsing cases, and in most of the cases the relapse was due to the passing off of the influence of the medicine.

The paper concluded as follows: "Fully admitting, therefore, the great immediate relief that appears to follow the use of those agents in the treatment of rheumatic fever, there still remains for consideration the further question whether, upon the whole, the treatment is successful. The answer to this question must depend upon whether the complications which are apt to arise in rheumatic fever are less frequent under this treatment; whether the condition of the patient after recovery is better or worse than under other modes of treatment; and, lastly, whether the length of time during which the patient is disabled is shorter or longer under this than under other modes of treatment. To all these questions my experience leads me to reply in the negative. We might have, perhaps, expected that hyperpyrexia at least would have been prevented by the use of such a powerful antipyretic agent, but the first two cases I have recorded negative this expectation, for hyperpyrexia was developed in both of these after the proper physiological influence of the salicylate of soda had become manifest. Pericarditis was present in many cases before the treatment was commenced; but, in several instances, it supervened afterwards. In three cases pneumonia, and in four others pleurisy supervened, when the physiological effects of the medicine had become manifest. On the other hand, several cases that were admitted with either pleuropneumonia, broncho-pneumonia, or bronchitis ran very much the course we are accustomed to witness in similar cases under other treatment.

"Patients treated with salicylate of soda appeared to me to become unusually anæmic and to regain health and strength very slowly. They are long in becoming fit to resume their occupations, and their recovery has appeared to me more edious than has been the case with patients treated on other methods. Excluding the two cases of hyperpyrexia, the two fatal cases, and nine very mild cases, which were on the average less than twenty days in the hospital, and, perhaps, recurred neither more quickly nor more slowly than such cases commonly do, I find that the remaining thirty-seven cases were on an average fifty-seven days each in the hospital. This period, however, by no means represents the duration of their disabling illness, for all had been at least a few days ill previous to admission, and probably none was discharged in a condition to resume work, many having been sent to convalescent hospitals, and others to their friends in the country to recruit. If now we examine into the duration in hospital of the cases treated with salicin, a very similar result is shown. Two cases which were admitted in an advanced stage of their illness being excluded, the average residence in hospital of each of the remaining eight cases was fifty-five days. With regard therefore to the treatment of rheumatic fever with salicin and salicylate of soda, we must, I think, come to the conclusion that most physicians did with regard to the treatment with blisters—viz., that the pain and distress of the patients are undoubtedly for a time greatly assuaged, but that the duration of the illness is not shortened. Of the two plans, I am of opinion that blisters applied in the vicinity of all the painful joints are by far the most efficacious and speedy in the relief they afford, and have the advantage of not producing so much subsequent debility.

"Another question now presents itself for our consideration, namely, whether it is not possible that some injurious consequence may result from the powerful action of the medicine upon the heart; and I am bound to express my fears that the marked weakening of the first sound of the heart present in so many cases indicates the exertion of an influence upon the muscular structure of that organ, which may not always pass entirely away when the treatment is suspended, and more particularly when either inflammation of the endocardium or pericardium or of the muscular structure itself exists during the treatment."

Mr. H. DAVY said that having himself been thrice the subject of rheumatic fever his experience might be acceptable. He believed that it is a very difficult matter to rightly estimate the value of various kinds of treatment, and he could not help thinking that many physicians had arrived at different conclusions from those of the President. When house-physician at Guy's Hospital he had carefully watched some twenty or thirty cases, and from this experience he believed that, although these drugs do not prevent complications arising, they relieve pain and pyrexia, and that cases so treated are more free from complications and relapses than appeared from Dr. Greenhow's experience, nor had he seen any serious vomiting occur. After Dr. MacLagan's statement as to the superiority of the salicin over the salicylate, he had prescribed the former, and although hallucinations, light-headedness, deafness, etc., were frequent, they were of small importance in comparison to the amount of relief given to the patient. Relapses were quite as much due to a too early return to fish diet as to the drugs. In his own three several attacks he had been under different treatment; the first time—a mild attack—he was treated by a country practitioner with opium and bleeding; the second time, when the rheumatism was complicated with scarlet fever, he was treated by a London physician with alkalies and without milk. The attack was brief, but he was anæmic for some months after. The last time he prescribed for himself under Dr. Taylor's supervision. He took fifteen grains of salicin every two hours, and in two days the temperature had fallen from 103° to

normal, and in ten days he was out of bed; whilst taking the drug he had slight deafness and hallucinations.

Dr. H. WEBER said that the results arrived at in his previous paper were indifferent, but the conclusion he came to was that the treatment was on the whole more successful than any treatment he had formerly applied. Since that time he had given these drugs in many cases, and his results had not been so unfavourable as the President's. He had found that, among forty-four patients treated with salicylate of soda, the average number of febrile days, including relapses, were fourteen; whereas in seventy cases otherwise treated the average number of febrile days were nineteen. He had not included the number of days in hospital, because in the German hospital most of the patients, being homeless, were retained longer than usual to prevent relapses. He thought that complications were not so frequent in cases treated by the salicylate; and since he had employed it he had not seen any cases of hyperpyrexia. As a rule, the urine yielded the perchloride of iron reaction on the first or second day of treatment by salicylic acid, but not by salicin. The author had not endeavoured to explain how salicylate of soda acts; he seemed to imply that it acted merely by reducing the heart's action. He himself (Dr. Weber) admitted this effect on the heart; but suggested that these drugs may act by a process of fermentation in the blood; for salicylate of soda diminishes the amount of sugar in diabetes. And he had found in cases where there is a rapid formation of bacteria in the urine, that the salicylate of soda diminishes this tendency.

Dr. CAVAFY said that his own experience of these drugs in acute rheumatism dated from 1876, and he had frequently observed the effects of salicylate of soda given in considerable doses—*e. g.*, half a drachm every two hours at the beginning, with a subsequent diminution in dose and frequency. In some particulars his experience was not in harmony with Dr. Greenhow's; for instance, that improvement only occurs coincidently with the development of toxic phenomena. Only a small percentage of his cases showed toxic effects. Nor did he think too much importance should be given to those unpleasant symptoms of deafness, tinnitus, delirium, etc.; they were distressing, but did not result in permanent harm; and they could be controlled by remitting one or two doses, or they subsided when tolerance was established. The proportion of cases of albuminuria out of fifty was a small one, and probably due to some accident, rather than to the drug. The relapses depend much upon the time during which the drug is continued in small doses. After saturation with the drug, if its administration be continued in small doses for a longer time than usual, relapses may to a considerable extent be avoided—especially if the diet is kept low. To be sure, in some cases recovery was tedious, but that is often the case in rheumatism. Still, in cases which are moderately severe at the onset, it was possible to get the patient out of bed in five days. He had met with a case of a lady who had previously had two attacks of rheumatic fever, of long and tedious duration, confining her to bed for many weeks. On the third or fourth day of her third attack, temperature 102.8°, swelling of several joints, and turbulent cardiac action. She was placed upon salicylate of soda in twenty-grain doses, and within a week was up and about. There was no relapse. Dr. Greenhow's cases included two fatal ones. Had the drug any share in this result? The weakening of the first sound of the heart may be due to the pyrexia.

A Rare Case of Vaso-motor Neurosis of the Lower Extremity.

At a late meeting of the Société Médicale des Hôpitaux (*Gazette Hebdomadaire*, April 9, 1880), M. STRAUS read a paper on the following rare case of vaso-motor neurosis of the lower extremity. A man, thirty-five years old, a